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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LIE, ANGELA M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,471	Applicant(s) NAGAI ET AL.	
	Examiner ANGELA M. LIE	Art Unit 2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. In the previous office action the Examiner indicated claims 1-4, 8-14 and 17-19 allowed. However, during the updated prior art search, the Examiner found the prior art reference that reads on the claimed limitations of those claims. In addition claims 5-7 have been rejected under 35 U.S.C 101, because based on the original specification "processing part" and "data processor" are equivalent and "processing part" could be implemented as software alone (see specification page 7, lines 7 and 8, "'part' ... herein includes hardware, firmware and/or software").
2. Currently claims 1-14 and 17-19 are pending and claims 15 and 16 are canceled.

Objection to Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: phrase "computer readable medium" has not been disclosed in the specification, hence a person of an ordinary skill in the art at the time the invention was made could not exclusively deduce what this medium encompasses.

35 USC § 101

4. With respect to claims 8-10, the Examiner interprets the "computer readable medium" as being represented by tangible storage medium" such as cd-rom, hard-disk.

Consequently, according to that interpretation claims 8-10 are statutory under premises of 35 U.S.C. 101.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 5-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In particular, it appears that the system disclosed in claims 5-7 could be only implemented as software, therefore the content of those claims could disclose software per se. The only element that might represent hardware element would be a "data processor", however from the original specification, "data processor" appears to be equivalent to "processing part" and according to page 7, lines 7 and 8 in the applicant's specification, the term "part" includes "hardware, firmware and/or software", thus the data processor could also be represented by software per se.

7. In order to overcome this rejection, the applicant needs to clearly identify that data processor is indeed at the very least combination of hardware and software, or incorporate other hardware elements present in the original specification, so that the system disclosed in claims 5-7 is a combination of software and hardware, hence statutory.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-10, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Aybay et al (US Patent No. 6,044,061), hereinafter referred to as Aybay.**

As to claims 1, 5, 8 and 18, Aybay discloses a method for processing a multiplicity of data update requests made by a customer (column 3, lines 13-15, wherein the requests taught by Aybay correspond to all requests submitted to a system for processing and that includes update requests (i.e. write)), the method comprising the steps of: grouping all of the data update requests which is followed by the updating of the corresponding data (i.e. execution of the requests) into a predetermined plurality of blocks for execution by a data processor (column 3, lines 58-67, wherein blocks correspond to channels, also shown in figure 9), the data update requests within each of the blocks and from one of the blocks to a next one of the blocks being arranged in an order that the data update requests need to be executed to yield a proper data result (column 3, lines 58-67, wherein the order is arranged according to the requests priority), each of the blocks having approximately a same capacity for the data update requests

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(column 3, lines 10-19), the capacity corresponding to a number of the data update requests which the data processor is adapted to efficiently process in order before processing the data update requests in the next one of the blocks (Figure 9, wherein each register within the channels i.e. L0 to L3 stores a request, and column 3, lines 58-67 and column 4, lines 1-11) ; and the data processor processing the data update requests within the one block in the order, and then the data processor processing the data update requests within the next block in the order (column 3, lines 58-67 and column 4, lines 1-11, wherein requests are arranged according to their priority, and column 13, lines 1-15).

As to claims 2, 6 and 9, Aybay discloses a method wherein the order is an order in which the data update requests were made (column 3, lines 1-9, wherein if requests are provided by a user in sequence from highest to lowest priority then that is the order in which they are allocated in the channels/blocks).

As to claims 3, 7 and 10, Aybay discloses a method wherein the capacity corresponds to a number of the data update requests which the data processing unit is adapted to optimally process in order in the one block before processing the data update in the next one of the blocks (column 3, lines 58-67 and column 4, lines 1-11, wherein if there no interruption (i.e. no new high priority requests are arriving) then requests are processed from the highest to lowest priority (i.e. moving from channel 0 to channel N)).

As to claims 4 and 19, Aybay discloses a method wherein the data update requests within each of the blocks are arranged into the order by order information

stored within or associated with the blocks (column 10, lines 15-18, wherein priority encoder has information necessary to decide the order of placed requests).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 11, 12-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aybay et al (US Patent No. 6,044,061), hereinafter referred to as Aybay, in view of In re Harza, 274F.2d 669, 671, 124 USPQ 378, 380 (CCPA 1960).**

As to claim 11, Aybay teaches a method for processing a multiplicity of data update requests made by a customer (column 3, lines 13-15, wherein the requests taught by Aybay correspond to all requests submitted to a system for processing and that includes update requests (i.e. write)), the method comprising the steps of: grouping all of the data update requests which is followed by the updating of the corresponding data (i.e. execution of the requests) into a predetermined plurality of blocks for execution by a data processor (column 3, lines 58-67, wherein blocks correspond to channels, also shown in figure 9), the data update requests within each of the blocks and from one of the blocks to a next one of the blocks being arranged in an order that the data update requests need to be executed to yield a proper data result (column 3, lines 58-67, wherein the order is arranged according to the requests priority), each of

the blocks having approximately a same capacity for the data update requests (column 3, lines 10-19), the capacity corresponding to a number of the data update requests which the data processor is adapted to efficiently process in order before processing the data update requests in the next one of the blocks (Figure 9, wherein each register within the channels i.e. L0 to L3 stores a request, and column 3, lines 58-67 and column 4, lines 1-11) ; and the data processor processing the data update requests within the one block in the order, and then the data processor processing the data update requests within the next block in the order (column 3, lines 58-67 and column 4, lines 1-11, wherein requests are arranged according to their priority, and column 13, lines 1-15). Aybay does not explicitly teach having multiple sets of blocks (i.e. duplicated), however it would have been obvious to one having ordinary skill in the art at the time the invention was made to duplicate request collecting step, since it has been held that mere duplication of the essential working steps (elements) involves only routine skill in the art (In re Harza, 124 USPQ 378, 380 (CCPA 1960)).

As to claim 12, Aybay teaches a method wherein the order is an order in which the data update requests were made (column 3, lines 1-9, wherein if requests are provided by a user in sequence from highest to lowest priority then that is the order in which they are allocated in the channels/blocks).

As to claim 13, Aybay teaches a method wherein the capacity corresponds to a number of the data update requests which the data processing unit is adapted to optimally process in order in the one block before processing the data update in the next one of the blocks (column 3, lines 58-67 and column 4, lines 1-11, wherein if there

no interruption (i.e. no new high priority requests are arriving) then requests are processed from the highest to lowest priority (i.e. moving from channel 0 to channel N)).

As to claim 14, Aybay teaches a method wherein the first data processing unit processes the first data update in parallel with the second data processing unit processing the second data update requests (column 4, lines 51-58).

As to claim 17, Aybay teaches a method wherein the grouping of all of the data update requests into the plurality of blocks is performed at a same time (column 3, lines 10-39, wherein the requests that are supplied at certain point of time are distributed to the appropriate channels according to their priority, in other words channel 0 (the highest priority) is filled out and then the lower priority blocks are utilized).

Pertinent Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kirovski (US Publication No. 2004/0163989) discloses a system for enhancing software integrity comprising multiple atomic execution units/blocks for storing instructions (Figure 3A).

Inquiry

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELA M. LIE whose telephone number is (571)272-8445. The examiner can normally be reached on M-F.

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14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Angela M Lie/
Examiner, Art Unit 2163

/don wong/

Supervisory Patent Examiner, Art Unit 2163